

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-43 (canceled)

Claim 44. (currently amended) An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector comprising a sequence encoding at least one immunogenic polypeptide, wherein said
~~polypeptide is a polypeptide naturally having a nonmembrane location and encoded by the~~
E6 or E7 early region of a HPV-16 papillomavirus genome, which is modified by inserting a membrane anchoring sequence, ~~and if the natural polypeptide lacks a secretory sequence,~~
~~inserting~~ a secretory sequence, so as to have a membrane location at the surface of the cells in which it is expressed, and wherein said vector is a non-integrative vector ~~and wherein~~
~~said immunogenic polypeptide is derived from a polypeptide encoded by the E6 or E7 early region of a papillomavirus genome.~~

Claim 45. (currently amended) The antitumoral composition according to claim 44, wherein said immunogenic polypeptide encoded by the E6 or E7 early region of a HPV-16

papillomavirus genome naturally has a nuclear location and wherein its natural nuclear localization sequence is deleted.

Claim 46. (previously presented) The antitumoral composition according to claim 44, wherein said membrane anchoring sequence and/or said secretory sequence is selected from the group consisting of rabies glycoprotein, HIV virus env glycoprotein, and measles virus F protein.

Claim 47. (currently amended) The antitumoral composition according to claim 44, wherein said immunogenic polypeptide is ~~derived from~~ a nononcogenic variant of said polypeptide encoded by the E6 or E7 early region of a papillomavirus genome, wherein said nononcogenic variant of said E6 polypeptide is a HPV-16 E6 polypeptide wherein residues 111 to 115 are deleted, or wherein said nononcogenic variant of said E7 polypeptide is a HPV-16 E7 polypeptide wherein residues 21 to 26 are deleted.

Claim 48. (previously presented) The antitumoral composition according to claim 44, wherein said vector further comprises a sequence encoding at least one polypeptide derived from a late polypeptide of a papillomavirus.

Claim 49. (currently amended) ~~The antitumoral composition according to claim 44 wherein at least one immunogenic polypeptide is such that~~ An antitumoral composition for

the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector comprising a sequence encoding:

- (1) ~~said an~~ immunogenic polypeptide ~~has~~ having a sequence ~~homologous or identical to that~~ shown in SEQ ID NO: 1,
- (2) ~~said an~~ immunogenic polypeptide ~~has~~ having a sequence ~~homologous or identical to that~~ shown in SEQ ID NO: 2, or
- (3) ~~said an~~ immunogenic polypeptide ~~has~~ having a sequence ~~homologous or identical to that~~ shown in SEQ ID NO: 1 and an immunogenic polypeptide having a sequence ~~homologous or identical to that~~ shown in SEQ ID NO: 2.

Claim 50. (previously presented) The antitumoral composition according to claim 44, wherein said recombinant vector comprises, in addition, the sequences encoding at least one polypeptide which enhances the antitumoral effect of said composition.

Claim 51. (currently amended) The antitumoral composition according to claim 50, wherein said ~~compound~~ polypeptide enhancing the antitumoral effect is an immunostimulator.

Claim 52. (previously presented) The antitumoral composition according to claim 51, wherein said immunostimulator is selected from the group consisting of interleukin-2, interleukin-7, interleukin-12 and the coadhesion molecules B7.1 and B7.2.

Claim 53. (previously presented) The antitumoral composition according to claim 44, wherein said recombinant vector is derived from a poxvirus.

Claim 54. (previously presented) The antitumoral composition according to claim 44, containing a pharmaceutically acceptable carrier allowing its administration by injection into humans or into animals.

Claim 56. (previously presented) A recombinant vector comprising sequences encoding one or more immunogenic polypeptide(s), wherein at least one of said polypeptides is a polypeptide as defined in claim 44.

Claim 57. (previously presented) A viral particle comprising a recombinant vector according to claim 56.

Claim 58. (previously presented) A method for the treatment of an HPV related cancerous or precancerous condition in a subject comprising administering an effective amount of the antitumoral composition of claim 47 to said subject to treat said cancer or tumor in said subject.

Claim 59. (previously presented) The method of claim 58, wherein said subject is diagnosed as having cancer of the cervix, a low-grade cervical dysplasia or a papillomavirus infection.

Claim 60. (currently amended) The antitumoral composition according to claim 47, wherein said nononcogenic variant of said E6 ~~polypeptide~~ polypeptide is a HPV-16 E6 polypeptide wherein residues 111 to 115 are deleted.

Claim 61. (previously presented) The antitumoral composition according to claim 47, wherein said nononcogenic variant of said E7 polypeptide is a HPV-16 E7 polypeptide wherein residues 21 to 26 are deleted.

Claim 62. (currently amended) ~~The antitumoral composition according to claim 48, wherein at least one immunogenic polypeptide is such that~~ An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector comprising a sequence encoding:

(1) ~~said an~~ an immunogenic polypeptide ~~has having~~ a sequence homologous or identical to that shown in SEQ ID NO: 1 and wherein said recombinant vector further comprises sequence encoding the L1 protein of a papillomavirus and/or the L2 protein of a papillomavirus,

(2) ~~said an~~ immunogenic polypeptide ~~has~~ having a sequence ~~homologous or identical to that~~ shown in SEQ ID NO: 2, and wherein said recombinant vector further comprises sequence encoding the L1 protein of a papillomavirus and/or the L2 protein of a papillomavirus, or

(3) ~~said an~~ immunogenic polypeptide ~~has~~ having a sequence ~~homologous or identical to that~~ shown in SEQ ID NO: 1, an immunogenic polypeptide having a sequence ~~homologous or identical to that~~ shown in SEQ ID NO: 2, and wherein said recombinant vector further comprises sequence encoding the L1 protein of a papillomavirus and/or the L2 protein of a papillomavirus.

Claim 63. (previously presented) The antitumoral composition according to claim 49, wherein said recombinant vector comprises, in addition, the sequences encoding at least one compound which enhances the antitumoral effect of said composition.

Claim 64. (previously presented) The antitumoral composition according to claim 49, wherein said recombinant vector is derived from a poxvirus.

Claim 65. (Canceled)

Claim 66. (previously presented) The antitumoral composition according to claim 53, wherein said poxvirus is MVA.

Claim 67. (previously presented) The antitumoral composition according to claim 64, wherein said poxvirus is MVA.

Claim 68. (previously presented) The antitumoral composition according to claim 63, wherein said compound which enhances the antitumoral effect is interleukin-2.

Claim 69. (previously presented) A method for the treatment of an HPV related cancerous or precancerous condition in a subject comprising administering an effective amount of the antitumoral composition according to claim 62 to said subject to treat said cancer or tumor in said subject.

Claim 70. (previously presented) The method of claim 69, wherein said subject is diagnosed as having cancer of cervix, a low grade cervical dysplasia or a papillomavirus infection.

Claim 71. (previously presented) A method for the treatment of an HPV related cancerous or precancerous condition in a subject comprising administering an effective amount of the viral particle according to claim 57 to said subject to treat said cancer or tumor in said subject.

Claim 72. (previously presented) The method of claim 71, wherein said subject is diagnosed as having cancer of cervix, a low grade cervical dysplasia or a papillomavirus infection.

Claim 73. (currently amended) ~~The antitumoral composition of claim 52,~~ An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector comprising a sequence encoding at least one immunogenic polypeptide, wherein said recombinant vector is a MVA vector and wherein the sequence encoding at least one immunogenic polypeptide comprises:

a first sequence encoding a nononcogenic variant of the polypeptide encoded by the E6 region of HPV-16, wherein the polypeptide encoded by the E6 region of HPV-16 has residues 111 to 115 deleted and is further modified by insertion of the secretory and membrane anchoring sequences of the measles F protein, and wherein the first sequence is under the control of the a vaccinia virus 7.5K promoter; and,

a second sequence encoding a nononcogenic variant of the polypeptide encoded by the E7 region of HPV-16, wherein the polypeptide encoded by the E7 region of HPV-16 has residues 21 to 26 deleted and is further modified by insertion of the secretory and membrane anchoring sequences of the rabies glycoprotein, and wherein the second sequence is under the control of the a vaccinia virus 7.5K promoter; and,

the vector further comprising a third sequence encoding human IL-2, wherein the third sequence is under the control of the a H5R promoter.

Claim 74. (previously presented) A method for the treatment of an HPV related cancerous or precancerous condition in a subject comprising administering an effective amount of the antitumoral composition of claim 73 to said subject to treat said cancerous or precancerous condition.

Claim 75. (previously presented) The method of claim 74 wherein said subject is diagnosed as having cancer of the cervix or a low grade cervical dysplasia.

Claim 76. (previously presented) The method of claim 74 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 77. (previously presented) The method of claim 58 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 78. (previously presented) The method of claim 69 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 79. (previously presented) The method of claim 71 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 80. (currently amended) A method for the treatment of an HPV-related cancerous or precancerous condition ~~is~~ in a subject comprising administering an effective amount of the antitumoral composition of claim 50 to said subject to treat said cancerous or precancerous condition.

Claim 81. (previously presented) The method of claim 80 wherein said subject is diagnosed as having cancer of the cervix or a low grade cervical dysplasia.

Claim 82. (previously presented) The method of claim 80 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.
